

Chapter 1 Introduction

1-1. Purpose

This manual provides detailed technical guidance and procedures for compliance with the policy in Engineer Regulation (ER) 1110-1-8156. That regulation establishes general criteria and presents policy and guidance for the acquisition, processing, storage, distribution, and utilization of non-tactical geospatial data throughout the U.S. Army Corps of Engineers (USACE) and in compliance with Executive Order (EO) 12906, Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure (NSDI) and other appropriate standards, including the Spatial Data Transfer Standard (SDTS)/Federal Information Processing Standard (FIPS) 173, Federal Geographic Data Committee (FGDC) standards, and Tri-Service Spatial Data Standards (TSSDS). This manual also provides detailed technical guidance and requirements and identifies standards for Geospatial Data and Systems (GD&S). By using this manual, USACE will maximize its use of GD&S technologies; will promote interoperability among GD&S technologies; will reduce duplication of geospatial data collection and software development; will support the digital geospatial data life cycle; and will strengthen the USACE role in the NSDI.

1-2. Applicability

This manual applies to all USACE Commands having civil works, military construction, and environmental restoration responsibilities. This manual specifically applies to functional areas having responsibility for regulatory investigations and studies, planning studies, real estate, emergency operations, and other functions involving automated GDS for surveying, mapping, or geospatial database development, such as modeling, and to GD&S that are used to produce a variety of products including: river and harbor maps, charts, and drawings; real estate tract or parcel maps; small- and medium-scale engineering drawings; survey reports; environmental studies; hazardous, toxic, and radioactive waste (HTRW) studies; and channel condition reports. This manual applies to in-house and contracted efforts. USACE customers for reimbursable work who are required to comply with the EO 12906, such as the Department of Defense (DoD) installations, Environmental Protection Agency, and the Federal Emergency Management Agency, will determine their level of compliance. These customers may opt to incorporate compliance with the EO into contracts with USACE or may accomplish compliance unassisted by USACE.

1-3. References

Required and related publications are listed in Appendix A.

1-4. Abbreviations and Acronyms

Abbreviations and acronyms used in this publication are listed in Appendix B.

1-5. Definitions

a. Geospatial Data - non-tactical data referenced, either directly or indirectly, to a location on the earth.

b. Geospatial Data Systems (GDS) - any automated system that employs geospatial data including Geographic Information Systems (GIS), Land Information Systems (LIS), Remote Sensing or Image Processing Systems, Computer-Aided Design and Drafting (CADD) systems, Automated Mapping/Facilities Management (AM/FM) systems, and other computer systems that employ or reference data using either absolute, relative, or assumed coordinates such as hydrographic surveying systems.

c. Geospatial Data and Systems (GD&S) - Geospatial data and the GDS that create and process the data.

d. USACE Commands - all subordinate entities of the U.S. Army Corps of Engineers including districts, divisions, research laboratories, and field offices.

e. Metadata - descriptive information about the data. Metadata describes the content, quality, fitness for use, access instructions, and other characteristics about the geospatial data.

f. National Geospatial Data Clearinghouse (Clearinghouse) - a distributed, electronic network of geospatial data producers, managers, and users operating on the Internet. The Clearinghouse is a key element of EO 12906 and will allow its users to determine what geospatial data exist, find the data they need, evaluate the usefulness of the data for their applications, and obtain or order the data as economically as possible.

g. USACE Clearinghouse Node - HQUSACE established and maintains a computer network server on the National Geospatial Data Clearinghouse. This node functions as the primary point of public entry to the USACE geospatial data discovery path in the Clearinghouse. A separate electronic data page for each USACE Command has been established on the server. The Internet Universal Resource Locator (URL) address for the USACE Clearinghouse node is http://corps_geo1.usace.army.mil

1-6. Scope

This manual provides detailed technical guidance and requirements and identifies standards related to GD&S. This includes: requirements analysis; implementation plans; organizational issues such as staffing, training, and managerial support; system configuration and procurement of hardware, software, and telecommunications equipment; standards; data issues such as collection and acquisition, metadata (documentation), schemas (classification), and electronic clearinghouses (data locator and access service); applications; and evaluation criteria. Implementation actions are included in paragraph 7 of ER 1110-1-8156.

1-7. Exclusions

a. Spatial data and computer systems that do not use coordinates that are directly or indirectly referenced to a position on the Earth are not required to adhere to this regulation. This exempts architectural, mechanical, electrical, structural, and sanitary engineering data and drawings of objects typically inside buildings, as well as the CADD systems used to develop such data and drawings.

b. Site plans showing building structure footprints or any data set about features on the exterior of a building or structure are geospatial data, are compatible with the NSDI concept, and are not excluded from this regulation. This data may use relative, assumed, or geographic coordinates and may be stored in a CADD or GIS environment.

c. This regulation also excludes business systems, such as those that focus on textual and statistical information that is created, stored, manipulated, queried, displayed, and transferred differently than geospatial data.

d. This regulation also excludes tactical spatial data and associated computer systems such as those used for fire control, targeting, and mission planning.

e. Users of excluded systems may find this document useful in implementing, organizing or managing their particular type of automated system; in identifying applicable standards; or in creating and maintaining a database. This manual may enhance interoperability among GDS and other data systems, and users of all automated systems are encouraged to coordinate, when appropriate, with users, managers, and administrators of other automated systems.

1-8. Brand Names

The citation in this manual of brand names of commercially available products does not constitute official endorsement or approval of the use of such products.